



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,798	08/17/2006	Takayuki Suzuki	1924.75687	2405
24978 7590 10/05/2009 GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606				
EXAMINER				
MAKI, STEVEN D				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
10/05/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/589,798

**Applicant(s)**

SUZUKI, TAKAYUKI

**Examiner**

Steven D. Maki

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/55/08)  
Paper No(s)/Mail Date 081706
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 11-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 11 and 20, the meets and bounds of the claimed ratio is uncertain. In other words, the scope of the ratio  $c/b$  in claim 11 is ambiguous and the scope of the ratio  $c/a$  in claim 20 is ambiguous. Examples: Line 4 of claim 11 and line 4 of claim 20 ambiguously refer to "the groove" (which one?). Line 10 of claim 11 and line 10 of claim 20 ambiguously refers to "the block" (which one?). Is the block on line 11 of claim 11 the one block or the other block? Claims 11 and 20 describe "the block facing length  $c$  is a length of a shorter line segment" and "comparing a length of the line segment between the blocks". It is unclear what length is compared with what length to determine the "shorter" length.

- 3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

- 4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Suzuki et al

**5) Claims 11-12 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al (US 7,404,423).**

Suzuki et al discloses a pneumatic tire with a tread comprising blocks and grooves. See Figure 1. In view of the substantial similarity between the tread pattern of Figure 1 of US 7,404,423 and Figure 1 of this application, it is reasonable to conclude that the claimed ratio of block facing length  $c$  / groove width  $a$  is inherently satisfied.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Japan 403

**6) Claims 11-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 403 (JP 03-132403) in view of Takada (US 6,000,451) and optionally Suzuki et al (US 7,404,423).**

Japan 403 discloses a pneumatic radial tire for heavy load having a tread comprising blocks and grooves. See abstract and Figure 1. In a central region of the tread, three block lines are defined by a "substantially net shaped tread pattern" of

inclined grooves, which are illustrated as being inclined at an angle of about 50 degrees with respect to the tire circumferential direction. See Figure 1. Protrusions are disposed at the bottom of the grooves to provide stone bite resisting properties. See abstract, Figure 1, Figure 3 and Figure 4c. The tread also comprises a row of blocks in each shoulder region of the tread. See Figure 1. The shape and arrangement of the blocks of Figure 1 of Japan 403 is generally similar to the shape and arrangement of blocks in Figure 1 of this application. Japan 403 does not literally recite block facing length c being 50-130% groove width b and/or block facing length c being 40-85% groove depth a.

As to claims 11-26, it would have been obvious to one of ordinary skill in the art to provide the blocks and grooves of the tread of Japan 403's heavy load tire such that block facing length "c" (as defined in claims 11 and 20) is 50-130% (or 100-130%) groove width "b" and/or block facing length "c" (as defined in claims 11 and 20) is 40-85% (or 60-80%) groove depth "a" and, with respect to claims 18 and 25, groove width "b" is 60-80% groove depth "a" in view of (1) Japan 403's disclosure to use a tread pattern having blocks and grooves shaped and arranged as shown in figure 1 for a heavy load tire, (2) Takada's teaching to provide the grooves of a tread pattern of a heavy duty tire such that the groove width GW is 6-15% of the tread width TW and the groove depth GH is 8-18% of the tread width wherein Takada's tread pattern is similar to that of Japan 403, and optionally (3) Suzuki's suggestion to use a tread pattern having blocks shaped and arranged as shown in Figure 1 to improve groove crack resistance for a heavy load tire. With respect to groove depth GH in Takada, it is noted

Art Unit: 1791

that Takada teaches that height H1 of protrusions at the bottom of the grooves is 10-25% groove depth GH and that examples 2 and 3 use a height H1 of 4 mm. Distances in millimeters can therefore be determined for groove depth GH, groove width GW and tread width TW using the relationships of  $H1 = 4 \text{ mm}$ ,  $H1 = 10\text{-}25\% \text{ GH}$ ,  $GH = 8\text{-}18\% \text{ TW}$  and  $GW = 6\text{-}15\% \text{ TW}$ .

## Remarks

7) The remaining references are of interest.

8) No claim is allowed.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/  
Primary Examiner, Art Unit 1791

Steven D. Maki  
September 30, 2009